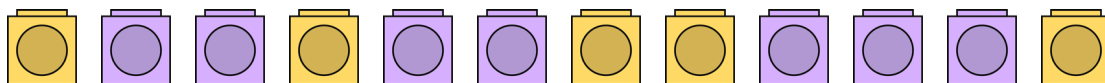


Fact families



Use equipment to help you create fact families.

a



$$\underline{5} + \underline{7} = \underline{\quad}$$

$$\underline{\quad} - \underline{5} = \underline{7}$$

$$\underline{7} + \underline{5} = \underline{\quad}$$

$$\underline{\quad} - \underline{7} = \underline{5}$$

b



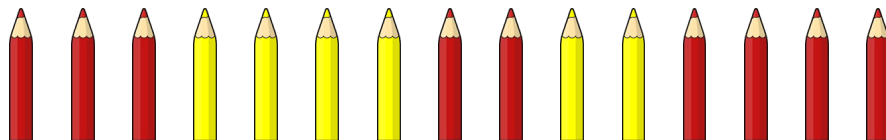
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

c



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

d



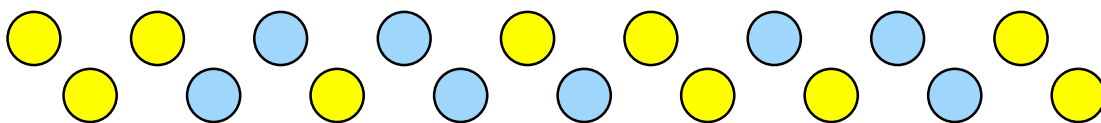
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

e



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

Fact families



Complete the part-whole models and write the associated fact families.

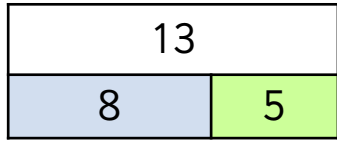
<p>a</p> <pre>graph TD; 13((13)) --- 9((9)); 13 --- 4((4));</pre>	$\underline{9} + \underline{4} = \underline{\quad}$ $\underline{4} + \underline{9} = \underline{\quad}$	$\underline{\quad} - \underline{9} = \underline{4}$ $\underline{\quad} - \underline{4} = \underline{9}$
<p>b</p> <pre>graph TD; 11((11)) --- 5((5)); 11 --- 6((6));</pre>	$\underline{\quad} + \underline{\quad} = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$
<p>c</p> <pre>graph TD; 20((20)) --- 13((13)); 20 --- 7((7));</pre>	$\underline{\quad} + \underline{\quad} = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$
<p>d</p> <pre>graph TD; 17((17)) --- 11((11)); 17 --- 6((6));</pre>	$\underline{\quad} + \underline{\quad} = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$
<p>e</p> <pre>graph TD; 19((19)) --- 9((9)); 19 --- 10((10));</pre>	$\underline{\quad} + \underline{\quad} = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$

Fact families



Write all the associated number sentences in the fact families.

a



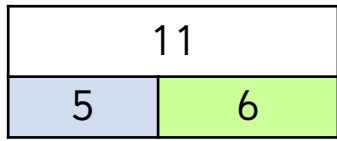
$$\underline{8} + \underline{5} = \underline{\quad}$$

$$\underline{\quad} - \underline{8} = \underline{5}$$

$$\underline{5} + \underline{8} = \underline{\quad}$$

$$\underline{\quad} - \underline{5} = \underline{8}$$

b



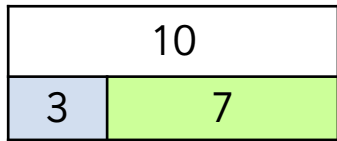
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

c



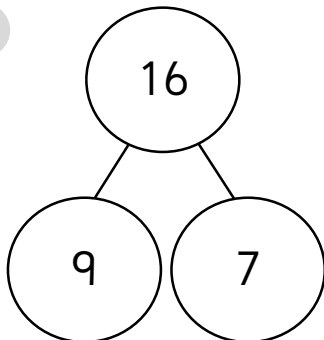
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

d



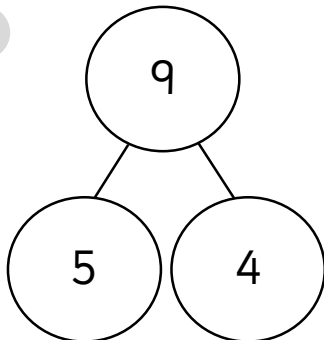
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

e



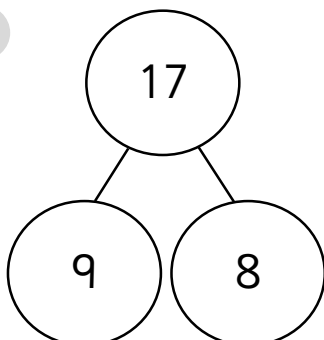
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

f



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

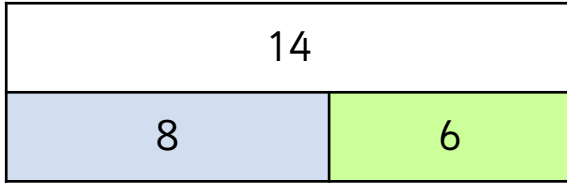
$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

Fact families



Complete the bar models and write the associated number sentences in the fact families.

a



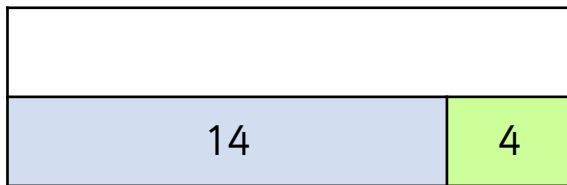
$$\underline{8} + \underline{6} = \underline{\quad}$$

$$\underline{6} + \underline{8} = \underline{\quad}$$

$$\underline{\quad} - \underline{8} = \underline{6}$$

$$\underline{\quad} - \underline{6} = \underline{8}$$

b



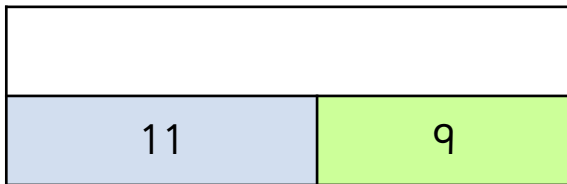
$$\underline{14} + \underline{4} = \underline{\quad}$$

$$\underline{4} + \underline{14} = \underline{\quad}$$

$$\underline{\quad} - \underline{14} = \underline{4}$$

$$\underline{\quad} - \underline{4} = \underline{14}$$

c



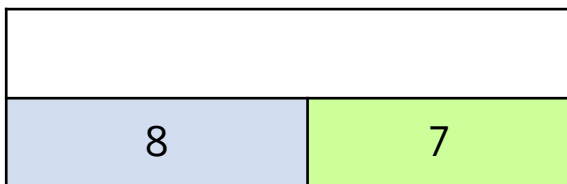
$$\underline{11} + \underline{9} = \underline{\quad}$$

$$\underline{9} + \underline{11} = \underline{\quad}$$

$$\underline{\quad} - \underline{11} = \underline{9}$$

$$\underline{\quad} - \underline{9} = \underline{11}$$

d



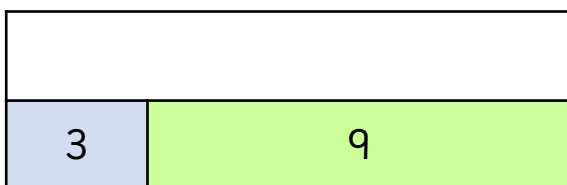
$$\underline{8} + \underline{7} = \underline{\quad}$$

$$\underline{7} + \underline{8} = \underline{\quad}$$

$$\underline{\quad} - \underline{8} = \underline{7}$$

$$\underline{\quad} - \underline{7} = \underline{8}$$

e



$$\underline{3} + \underline{9} = \underline{\quad}$$

$$\underline{9} + \underline{3} = \underline{\quad}$$

$$\underline{\quad} - \underline{3} = \underline{9}$$

$$\underline{\quad} - \underline{9} = \underline{3}$$

Fact families



Complete the part-whole models and write the associated fact families.

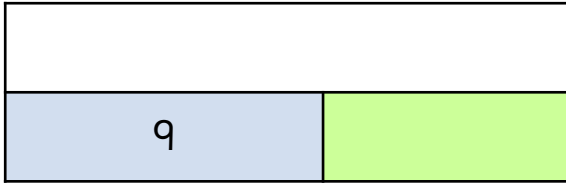
<p>a</p> <p>A part-whole model with a top circle and two bottom circles. The bottom-left circle contains the number 13, and the bottom-right circle contains the number 6.</p>	$\underline{\quad} + \underline{\quad} = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$
<p>b</p> <p>A part-whole model with a top circle containing the number 13 and two bottom circles. The bottom-right circle contains the number 4, and the bottom-left circle is empty.</p>	$\underline{\quad} + \underline{\quad} = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$
<p>c</p> <p>A part-whole model with a top circle and two bottom circles. The bottom-left circle contains the number 10, and the bottom-right circle contains the number 5.</p>	$\underline{\quad} + \underline{\quad} = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$
<p>d</p> <p>A part-whole model with a top circle containing the number 14 and two bottom circles. The bottom-left circle contains the number 6, and the bottom-right circle is empty.</p>	$\underline{\quad} + \underline{\quad} = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$
<p>e</p> <p>A part-whole model with a top circle and two bottom circles. The bottom-left circle contains the number 4, and the bottom-right circle contains the number 7.</p>	$\underline{\quad} + \underline{\quad} = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$

Fact families



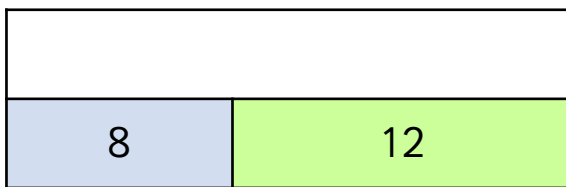
Complete the bar models and write the associated number sentences in the fact families.

a



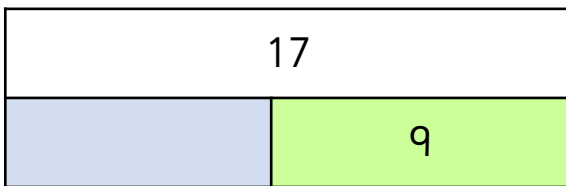
$$\begin{array}{l} \underline{\quad} + \underline{\quad} = \underline{\quad} \\ \underline{\quad} + \underline{\quad} = \underline{\quad} \\ \underline{\quad} - \underline{\quad} = \underline{\quad} \\ \underline{\quad} - \underline{\quad} = \underline{\quad} \end{array}$$

b



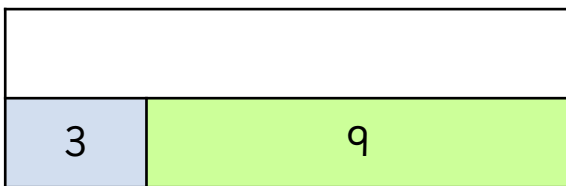
$$\begin{array}{l} \underline{\quad} + \underline{\quad} = \underline{\quad} \\ \underline{\quad} + \underline{\quad} = \underline{\quad} \\ \underline{\quad} - \underline{\quad} = \underline{\quad} \\ \underline{\quad} - \underline{\quad} = \underline{\quad} \end{array}$$

c



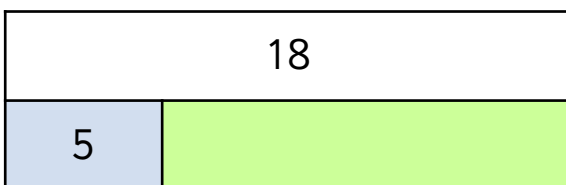
$$\begin{array}{l} \underline{\quad} + \underline{\quad} = \underline{\quad} \\ \underline{\quad} + \underline{\quad} = \underline{\quad} \\ \underline{\quad} - \underline{\quad} = \underline{\quad} \\ \underline{\quad} - \underline{\quad} = \underline{\quad} \end{array}$$

d



$$\begin{array}{l} \underline{\quad} + \underline{\quad} = \underline{\quad} \\ \underline{\quad} + \underline{\quad} = \underline{\quad} \\ \underline{\quad} - \underline{\quad} = \underline{\quad} \\ \underline{\quad} - \underline{\quad} = \underline{\quad} \end{array}$$

e



$$\begin{array}{l} \underline{\quad} + \underline{\quad} = \underline{\quad} \\ \underline{\quad} + \underline{\quad} = \underline{\quad} \\ \underline{\quad} - \underline{\quad} = \underline{\quad} \\ \underline{\quad} - \underline{\quad} = \underline{\quad} \end{array}$$

Answers

To avoid wasting paper & ink,
please do not print this page.

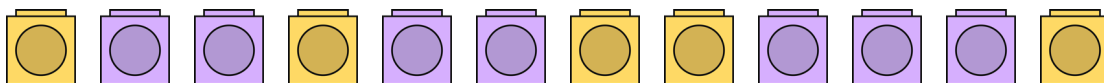


Fact families



Use equipment to help you create fact families.

a



$$\underline{5} + \underline{7} = \underline{12}$$

$$\underline{12} - \underline{5} = \underline{7}$$

$$\underline{7} + \underline{5} = \underline{12}$$

$$\underline{12} - \underline{7} = \underline{5}$$

b



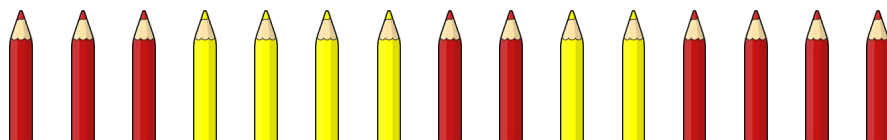
$$\underline{6} + \underline{8} = \underline{14}$$

$$\underline{14} - \underline{6} = \underline{8}$$

$$\underline{8} + \underline{6} = \underline{14}$$

$$\underline{14} - \underline{8} = \underline{6}$$

c



$$\underline{9} + \underline{6} = \underline{15}$$

$$\underline{15} - \underline{9} = \underline{6}$$

$$\underline{6} + \underline{9} = \underline{15}$$

$$\underline{15} - \underline{6} = \underline{9}$$

d



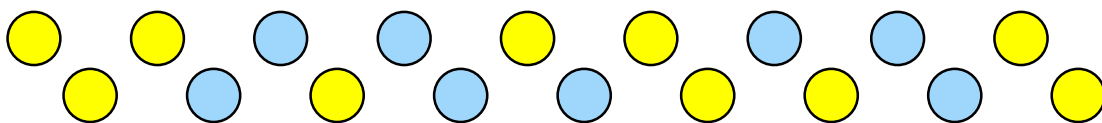
$$\underline{5} + \underline{8} = \underline{13}$$

$$\underline{13} - \underline{5} = \underline{8}$$

$$\underline{8} + \underline{5} = \underline{13}$$

$$\underline{13} - \underline{8} = \underline{5}$$

e



$$\underline{10} + \underline{8} = \underline{18}$$

$$\underline{18} - \underline{10} = \underline{8}$$

$$\underline{8} + \underline{10} = \underline{18}$$

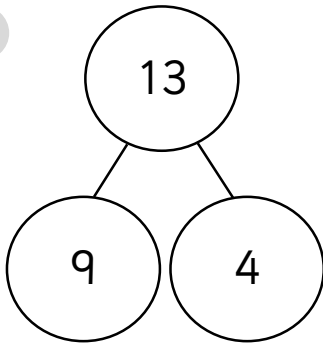
$$\underline{18} - \underline{8} = \underline{10}$$

Fact families



Complete the part-whole models and write the associated fact families.

a



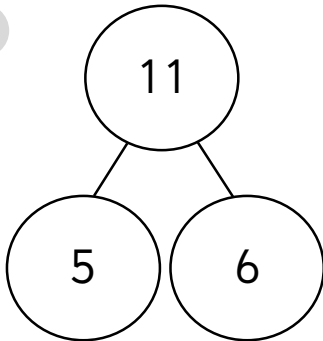
$$\underline{9} + \underline{4} = \underline{13}$$

$$\underline{13} - \underline{9} = \underline{4}$$

$$\underline{4} + \underline{9} = \underline{13}$$

$$\underline{13} - \underline{4} = \underline{9}$$

b



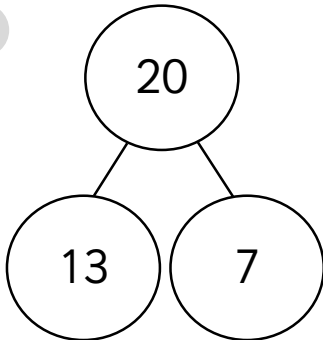
$$\underline{5} + \underline{6} = \underline{11}$$

$$\underline{11} - \underline{5} = \underline{6}$$

$$\underline{6} + \underline{5} = \underline{11}$$

$$\underline{11} - \underline{6} = \underline{5}$$

c



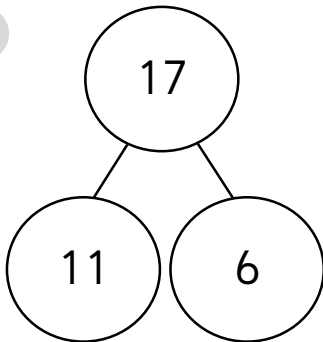
$$\underline{13} + \underline{7} = \underline{20}$$

$$\underline{20} - \underline{13} = \underline{7}$$

$$\underline{7} + \underline{13} = \underline{20}$$

$$\underline{20} - \underline{7} = \underline{13}$$

d



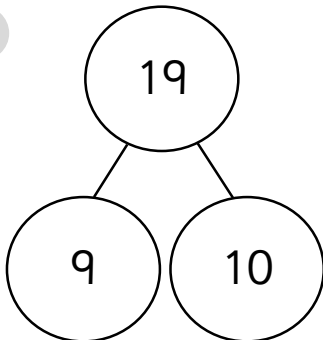
$$\underline{11} + \underline{6} = \underline{17}$$

$$\underline{17} - \underline{11} = \underline{6}$$

$$\underline{6} + \underline{11} = \underline{17}$$

$$\underline{17} - \underline{6} = \underline{11}$$

e



$$\underline{9} + \underline{10} = \underline{19}$$

$$\underline{19} - \underline{9} = \underline{10}$$

$$\underline{10} + \underline{9} = \underline{19}$$

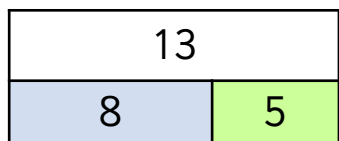
$$\underline{19} - \underline{10} = \underline{9}$$

Fact families



Write all the associated number sentences in the fact families.

a



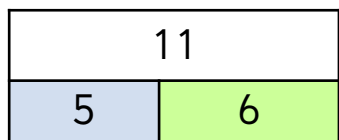
$$\underline{8} + \underline{5} = \underline{13}$$

$$\underline{13} - \underline{8} = \underline{5}$$

$$\underline{5} + \underline{8} = \underline{13}$$

$$\underline{13} - \underline{5} = \underline{8}$$

b



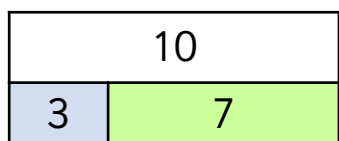
$$\underline{5} + \underline{6} = \underline{11}$$

$$\underline{11} - \underline{5} = \underline{6}$$

$$\underline{6} + \underline{5} = \underline{11}$$

$$\underline{11} - \underline{6} = \underline{5}$$

c



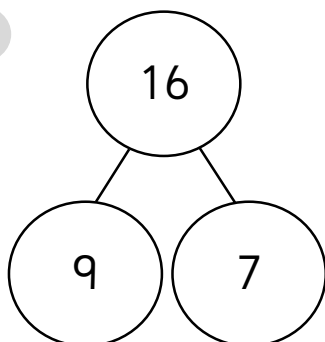
$$\underline{3} + \underline{7} = \underline{10}$$

$$\underline{10} - \underline{3} = \underline{7}$$

$$\underline{7} + \underline{3} = \underline{10}$$

$$\underline{10} - \underline{7} = \underline{3}$$

d



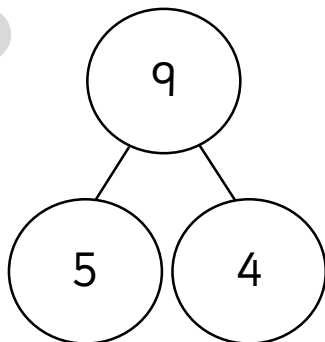
$$\underline{9} + \underline{7} = \underline{16}$$

$$\underline{16} - \underline{9} = \underline{7}$$

$$\underline{7} + \underline{9} = \underline{16}$$

$$\underline{16} - \underline{7} = \underline{9}$$

e



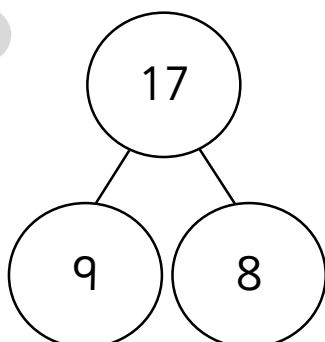
$$\underline{5} + \underline{4} = \underline{9}$$

$$\underline{9} - \underline{5} = \underline{4}$$

$$\underline{4} + \underline{5} = \underline{9}$$

$$\underline{9} - \underline{4} = \underline{5}$$

f



$$\underline{9} + \underline{8} = \underline{17}$$

$$\underline{17} - \underline{9} = \underline{8}$$

$$\underline{8} + \underline{9} = \underline{17}$$

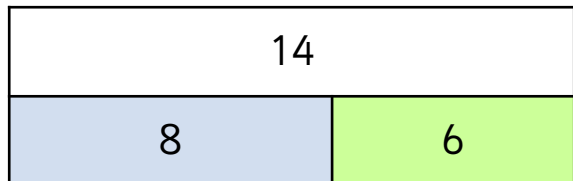
$$\underline{17} - \underline{8} = \underline{9}$$

Fact families



Complete the bar models and write the associated number sentences in the fact families.

a



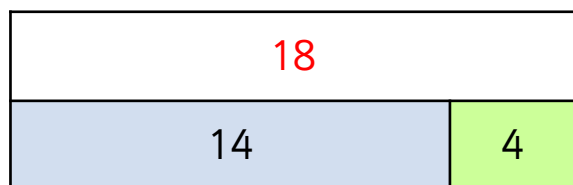
$$\underline{8} + \underline{6} = \underline{14}$$

$$\underline{6} + \underline{8} = \underline{14}$$

$$\underline{14} - \underline{8} = \underline{6}$$

$$\underline{14} - \underline{6} = \underline{8}$$

b



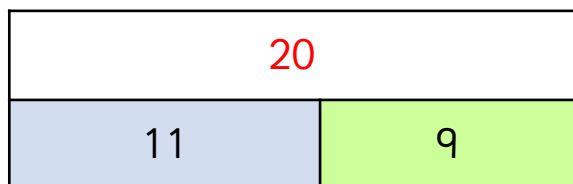
$$\underline{14} + \underline{4} = \underline{18}$$

$$\underline{4} + \underline{14} = \underline{18}$$

$$\underline{18} - \underline{14} = \underline{4}$$

$$\underline{18} - \underline{4} = \underline{14}$$

c



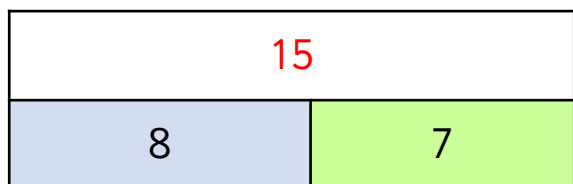
$$\underline{11} + \underline{9} = \underline{20}$$

$$\underline{9} + \underline{11} = \underline{20}$$

$$\underline{20} - \underline{11} = \underline{9}$$

$$\underline{20} - \underline{9} = \underline{11}$$

d



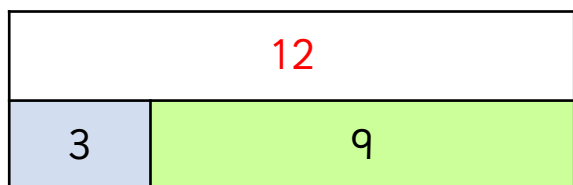
$$\underline{8} + \underline{7} = \underline{15}$$

$$\underline{7} + \underline{8} = \underline{15}$$

$$\underline{15} - \underline{8} = \underline{7}$$

$$\underline{15} - \underline{7} = \underline{8}$$

e



$$\underline{3} + \underline{9} = \underline{12}$$

$$\underline{9} + \underline{3} = \underline{12}$$

$$\underline{12} - \underline{3} = \underline{9}$$

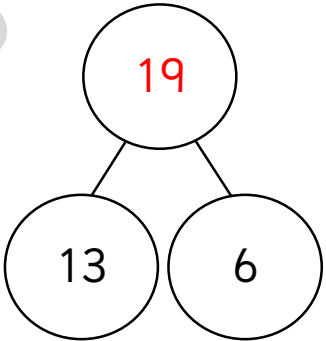
$$\underline{12} - \underline{9} = \underline{3}$$

Fact families

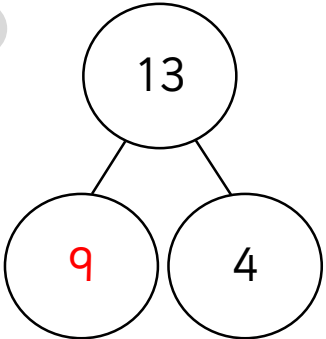


Complete the part-whole models and write the associated fact families.

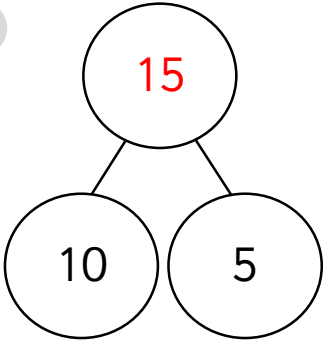
a


$$\begin{array}{r} \underline{13} + \underline{6} = \underline{19} \\ \underline{6} + \underline{13} = \underline{19} \end{array}$$
$$\begin{array}{r} \underline{19} - \underline{13} = \underline{6} \\ \underline{19} - \underline{6} = \underline{13} \end{array}$$

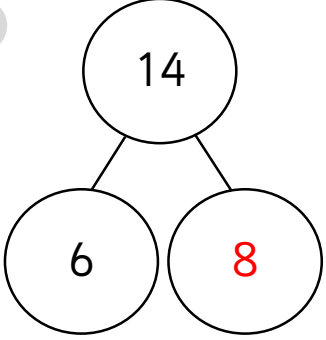
b


$$\begin{array}{r} \underline{9} + \underline{4} = \underline{13} \\ \underline{4} + \underline{9} = \underline{13} \end{array}$$
$$\begin{array}{r} \underline{13} - \underline{9} = \underline{4} \\ \underline{13} - \underline{4} = \underline{9} \end{array}$$

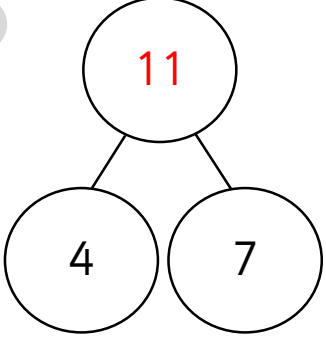
c


$$\begin{array}{r} \underline{10} + \underline{5} = \underline{15} \\ \underline{5} + \underline{10} = \underline{15} \end{array}$$
$$\begin{array}{r} \underline{15} - \underline{10} = \underline{5} \\ \underline{15} - \underline{5} = \underline{10} \end{array}$$

d


$$\begin{array}{r} \underline{6} + \underline{8} = \underline{14} \\ \underline{8} + \underline{6} = \underline{14} \end{array}$$
$$\begin{array}{r} \underline{14} - \underline{6} = \underline{8} \\ \underline{14} - \underline{8} = \underline{6} \end{array}$$

e

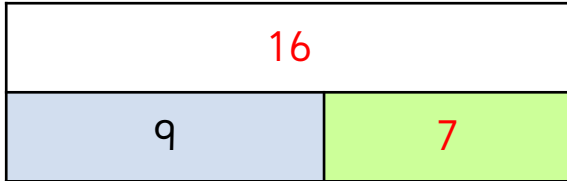

$$\begin{array}{r} \underline{4} + \underline{7} = \underline{11} \\ \underline{7} + \underline{4} = \underline{11} \end{array}$$
$$\begin{array}{r} \underline{11} - \underline{4} = \underline{7} \\ \underline{11} - \underline{7} = \underline{4} \end{array}$$

Fact families



Complete the bar models and write the associated number sentences in the fact families.

a



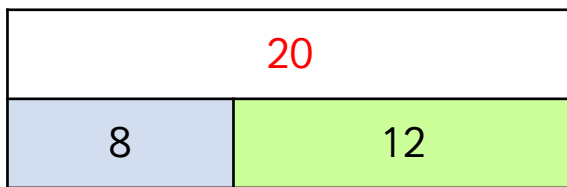
$$\underline{9} + \underline{7} = \underline{16}$$

$$\underline{7} + \underline{9} = \underline{16}$$

$$\underline{16} - \underline{9} = \underline{7}$$

$$\underline{16} - \underline{7} = \underline{9}$$

b



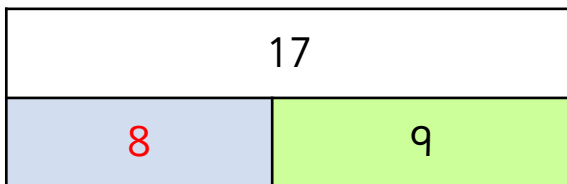
$$\underline{8} + \underline{12} = \underline{20}$$

$$\underline{12} + \underline{8} = \underline{20}$$

$$\underline{20} - \underline{8} = \underline{12}$$

$$\underline{20} - \underline{12} = \underline{8}$$

c



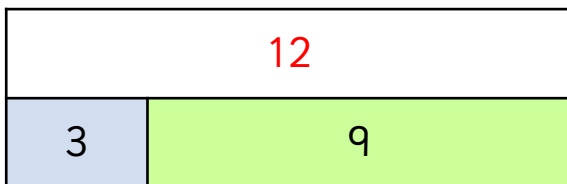
$$\underline{8} + \underline{9} = \underline{17}$$

$$\underline{9} + \underline{8} = \underline{17}$$

$$\underline{17} - \underline{8} = \underline{9}$$

$$\underline{17} - \underline{9} = \underline{8}$$

d



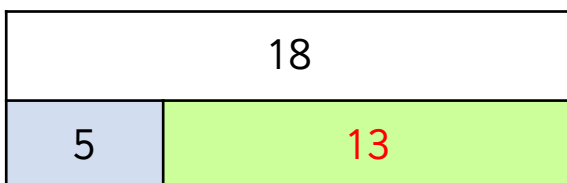
$$\underline{9} + \underline{3} = \underline{12}$$

$$\underline{3} + \underline{9} = \underline{12}$$

$$\underline{12} - \underline{9} = \underline{3}$$

$$\underline{12} - \underline{3} = \underline{9}$$

e



$$\underline{5} + \underline{13} = \underline{18}$$

$$\underline{13} + \underline{5} = \underline{18}$$

$$\underline{18} - \underline{5} = \underline{13}$$

$$\underline{18} - \underline{13} = \underline{5}$$